

**HUNGARIAN CHILD LANGUAGE
RESEARCH: 1970-1990**

by

Budapest, 1990

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by

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Edited and compiled by

CSABA PLÉH

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This volume is dedicated to the memory of Klára Meggyes (1935-1990) our beloved and respected colleague. The chapters of this booklet witness the importance of her work in the formation of modern Hungarian child language research in many areas from phonetics through grammar and the lexicon to studies on the organization of child discourse.

As a member of the organizing committee she was very instrumental in putting order into the preparations of the Budapest conference and in starting the wheels to run smoothly. By remembering her not only as a fellow scholar but as an active organizer of this conference as well we hope that our sorrow shall be shared by the multilingual community she helped to bring here. She is going to be missed not only by her Hungarian colleagues and friends but by the invisible college of child language researchers as well.

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INTRODUCTION

This little booklet is a mainly descriptive summary of child language research done in Hungary during the last two decades. A two decades limit was chosen for the survey due to two reasons. First, Hungarian child language research has become more active during this period. Second, research up to this point is covered by the special chapter by MacWhinney in Slobin's new edition of Leopold's **Bibliography of Child Language**.

The authors tried to cover all research within Hungary but do not have the ambition to describe all the studies done on Hungarian outside Hungary as well. Beside giving a concise summary of the researches, we tried to give sufficient bibliographic and logistic information for the user to get in touch with the original material and/or the researchers themselves.

Two reference lists are given at the end of the booklet. The **Bibliography** covers the material on Hungarian. Out of the references written in Hungarian, only the most important ones are mentioned, while we tried to include all publications in a foreign language done by Hungarians on Hungarian. The **Reference Notes** section lists the most important other bibliographical entries mentioned in the text.

The reader has to keep in mind some background information on the setting of child language research in Hungary. 'Serious research' in the Western sense is done by linguists and psychologists in academic contexts. However, in Hungary there is a constant emphasis on the importance of mother tongue education at all levels. Related to this fact, there is a rich educational literature on language programs in nursery schools, formal mother tongue education in the schools, early second language acquisition, issues of proper usage, delayed development and the like. Most of this literature has been ignored here since although interesting it lacks solid scientific goals. It mainly discusses educational programs, priorities and techniques. The interested reader with sufficient knowledge of Hungarian can find them in journals like *óvodai Nevelés* (Nursery School Education), *Magyar Nyelvőr* (Proper Hungarian), *Gyógypedagógiai Szemle* (Review of Special Education) and the like.

Our survey has no ambitions to present a systematic outline of the acquisition of Hungarian; it is merely an overview of the existing studies.

INSTITUTIONAL INFORMATION ON RECENT RESEARCH
(with contact persons)

Institute for Linguistics Hungarian Academy of Sciences

Budapest, P.O. Box 19, 1250. T.: (36-1)-1-75-82-85, 1-561-244

- Zita Réger:** early bilingualism, sociolinguistics, child communicative competence, disadvantage
- Ilona Kassai:** phonetics, suprasegmental features in child language, concept of language in the child
- Mária Gósy:** (T.: 1-557-122 ext 348)
child language, phonetics, phonology and speech perception, diagnosis of speech decoding defects

Institute for Psychology Hungarian Academy of Sciences

Budapest, Teréz körút 67, 1064 T.: (36-1)-1-220-425

- Júlia S. Kádár:** preverbal stage, nursery children's speech development, picture description, social and educational aspects

Loránd Eötvös University, Department of General Psychology

Budapest, P.O. Box 4, 1378 T.: (36-1)-1-423-130

- Anikó Kónya:** word order and pictural representation, semantics and conceptual development
- Csaba Pléh:** understanding sentences, prefix system, language of space, testing

Training School for Teachers of the Handicapped, Hungary

Department of Phonetics and Logopedy

Budapest, Betlen Gábor tér 1 T.: (36-1)-1-421-379

- József Lőrík:** vocabulary, language testing
- Emőke Kovács:** language testing, linguistic aspects of speech
- Yvonne Csányi:** disorders, hearing defects, Peabody test

Speech Therapy Center

Budapest, Damjanich u. T.: (36-1)-1-213-526, 1-425-314

- Gábor Palotás:** language testing, hemispheric dominance, childhood disorders of language
- Ágnes Juhász:** children's Token Test
- Katalin Gereben:** delayed speech therapy

Gyula Juhász Teacher's Training School

Szeged, T.:(36-62)-10-122

Zsolt Lengyel: early second language teaching (Russian), education
and child language

Janus Pannonius University, Language and Communication Institute

Pécs, Ifjúság u. 6, 7624. T.:(36-72)-27-622

Alexander Jarovinskij: word acquisition, bilingualism, second language acquisition,

Zsófia Radnai: early second language teaching (English)

SOME BASIC FACTS ABOUT THE STRUCTURE OF HUNGARIAN

(Csaba Pléh)

This chapter tries to give sufficient information for non-Hungarian colleagues on the structure of Hungarian that might be relevant to understand the specific child language studies. mainly those aspects are highlighted that are specific to Hungarian especially compared with the Indo-European languages.

The sound pattern of Hungarian

The Hungarian vowel system consists of 14 vowel phonemes. There are four types of phonemic oppositions three of them according to the place of articulation and one according to duration. However, there are vowels that do not have long counterparts in the Hungarian standard speech. Table 1 shows this system containing palatal, velar, labial, illabial, low, mid, high, and short and long vowels.

velars			palatals	
illabial/labial			labial/illabial	
high	u, u:		y, y:	i, i:
mid	o, o:		ø, ø:	ä:
low	a:		-	e

Table 1.

The vowel system of standard Hungarian

In standard Hungarian there is no vowel reduction, the pronunciation of vowels is always the same independently of word stress and of their place in the word.

The Hungarian consonant system can be classified into three groups according to the manner, place of articulation and also the voice-voiceless contrast. Duration of the consonants should also be taken into consideration as a fourth phonemic feature. Table 2 summarizes the Hungarian consonant system.

Place Manner	Stops	Nasals	Fricatives	Affricates	Laterals
bilabials	b-p	m			
labiodentals				v-f	
dentals	d-t	n		z-s	dz-ts l r
alveolars				ʃ-ʒ	dʒ-tʃ
palatals	ʃ-c	ɲ		j	
velars	g-k				
glottal				h	

Table 2.
The Hungarian consonants

Note on the left side of the - symbol voiced, while on the right side unvoiced consonants are indicated. There is a marked difference in VOT for Hungarian stops comparing it with the same VOT-values characteristic for English or German stops.

As it was mentioned above, a phonemic difference is existing between short and long counterparts of the consonants (with the exceptions of the dental dz and the alveolar dʒ). More descriptive information on the system can be found in Lotz (1988), and in a modern phonological framework in different chapters of Kenesei (1984).

The most characteristic phonotactic rule of Hungarian is vowel harmony. This means that originally Hungarian words do contain either velar or palatal vowels followed by the appropriate suffix(es). Present Hungarian uses also mixed-vowel words, however, suffixation of words should meet the requirements of vowel harmony, i.e. front-vowel words have suffixes containing front vowels, back-vowel words have suffixes containing back-vowel suffixes, while mixed words generally have suffixes with that of back vowels. E.g. the two allomorphs for the inessive IN suffix are -ban and -ben. With some suffixes a degenerate rounding harmony exists as well.

Considering suprasegmental features of Hungarian, three facts should be emphasized. (i) There is a strong stress rule to the effect that always the first syllable carries the main stress (with no exception). However, in compounds a secondary stress frequently appears as well. (ii) The basic melody pattern is falling intonation contour. It is worth to mention that in interrogative sentences no final rising intonation occurs. (iii) The main stress of a sentence is on the focus position, i.e. on the position immediately preceding the verb or on the verb itself (see below in connection with word order).

Case marking and agglutination

The Hungarian language provides a variety of interesting grammatical features they are relevant for studies of child language. Hungarian is an agglutinative language with a very rich case system. Case marking itself means that nouns carry markers of their grammatical role on themselves. Agglutination is something more than that. It also means that most of their interesting grammatical distinctions are carried by bound morphemes --- mainly suffixes going back to free morphs (function words) --- and grammatical distinctions build up in a "bricklike" manner: a separate identifiable morpheme corresponds to each grammatical distinction. Grammatical morphemes are strictly ordered following the stem. Thus, in a certain sense the system is more transparent than the flexional one familiar from Indo-European languages where several grammatical distinctions are marked by one single morpheme (think about the singular and plural accusative in Latin) and where the same grammatical distinction is marked by different morphemes in different stem classes. Some basic features of the system will be presented with regard to the nominal paradigm. For a good structural characterization of Hungarian see Lotz (1939/1988) which is still the best source. For a psycholinguistically oriented characterization see MacWhinney (1985).

As an example, we will present data on agglutination in the nominal paradigm. However, it should be kept in mind that this is a basic feature that characterized the verbal system, and derivational morphology as well. In the nominal paradigm agglutination basically means the following: Nouns are marked for case and number with two distinctive markers with fixed order:

stem + number + case marker

Thus, the nominative *fiú* (boy) takes the -t accusative marker in the singular to give the form *fiú-t*, becomes *fiú-k* in the plural nominative (the plural marker being -k), and is *fiú-k-at* in the plural accusative.

There are over 20 cases in the nominal paradigm. Besides the zero marked nominative and accusative, the instrumental-committative, the dative and the different adverbial relations (in, to, from, at, etc.) are also carried by different case markers. There are no stem types similar to the ones in Indo-European languages; all stems take the same marking to code the same grammatical relation.

Deviations from Transparency in the nominal paradigm

This indeed seems to be a very transparent system to acquire and to use. There are, however, two major deviations from this transparency. First, although there are no stem types with different endings in different classes, some stems undergo characteristic modifications as a result of morphophonemic rules. The marker for the accusative, for example, is always *T*. This is, however, as MacWhinney (1978) has phrased it, only a "common denominator" of the different modifications stems undergo when in the accusative. It can be attached directly to the stem *maci* "bear" - *maci-t*, Vowel lengthening can occur in stems ending in a short *-a* or *u* - *e* as in *macska* "cat" *macská-t* 1. The case marker can also be preceded by a linking vowel in some of the stems ending in a consonant as in *zsiráf* "giraffe" -- *zsiráf-o-t*, and vowel shortening can also occur with long *-é-* or *-á-* in closed final syllables as in *tehén* "cow" -- *tehen-et*. These modifications are only semiarbitrary: They usually correspond to the phonological nature of the stem and follow sophisticated morphophonemic rules. There is no need here to go into the details of the system. MacWhinney (1978) gives a rather extensive summary.

Table 3 gives a few examples for the different stem types. It should be clear from the examples that when a child learns Hungarian he or she has to acquire these lawful modifications besides the common form of the morphological marker for certain grammatical relations. The system has relevance for the process of understanding as well: The different allomorphs have to be mapped onto the same basic relationship during perception.

Notice a few things in connection with Table 3. First, all the case markers containing a vowel or involving a linking vowel obey the vowel harmony mentioned in the phonetic chapter above.

	I Cluster	II Length	III Short	IV Linking v.	V Dropping
Nomin.	mókus	macska	tehén	zsiráf	majom
	squirrel	cat	cow	giraffe	monkey
Accusative	mókus-t	macská-t	tehen-et	zsiráf-ot	majm-ot
Dative	mókus-nak	macská-nak	tehén-nek	zsiráf-nak	majom-nak
Instrumen.	mókus-sal	macská-val	tehén-nel	zsiráf-fal	majom-mal
Illative	mókus-ba	macská-ba	tehén-be	zsiráf-ba	majom-ba
Inessive	mókus-ban	macská-ban	tehén-ben	zsiráf-ban	majom-ban
Erelative	mókus-ból	macská-ból	tehén-ből	zsiráf-ból	majom-ból
Sublative	mókus-ra	macská-ra	tehén-re	zsiráf-ra	majom-ra
Superess.	mókus-on	macská-n	tehén-en	zsiráf-on	majm-on
Delative	mókus-ról	macská-ról	tehén-ről	zsiráf-ról	majom-ról
Plural	mókus-ok	macská-k	tehen-ek	zsiráf-ok	majm-ok

Table 3. Morphological patterns of some Hungarian nominal types

Some stems are inherently more difficult with regard to perceptual identification of certain endings, and some stem alterations --- most notably linking vowels --- may have been preserved in the language exactly to enhance perceivability.

The other deviations from the transparency of the system concern the unequivocal correspondence between case markers and basic syntactic or semantic relations in the sentence. Consider the nominative--accusative distinction which should ideally always correspond to the subject--object distinction on the syntactic level and the agent--object distinction in terms of semantic cases. There are two deviations from this one-to-one correspondence. Certain relations may be unmarked, and certain relations may be marked with varying endings.

Specific deviations form obligatory and unique marking appear in expressions for possession. In second and first person possessively marked nouns the difference between accusative and nominative is neutralized. Thus, with the *-m* "my" possessive marker the form *ház-am* can both mean "my house, nominative" and "my house accusative". There are other deviations from the one to one mapping both in the sense that the same marker can carry different distinctions and also in the sense that the same distinction can be marked by different devices. All this of course makes the task of the child harder and has some straightforward predictions concerning acquisition order and overgeneralizations.

Word Order

Word order of the main constituents in Hungarian sentences is basically free. One can think of this terms of a tradeoff between morphological marking of syntactic-thematic roles and ordering: Since the thematic roles are marked on the nouns themselves word order is "freed" to serve other purposes. How do we have to interpret this freedom of word order? First of all, it only relates to the freedom of ordering of the major constituents. Words within a noun phrase, for example, are rather strictly ordered as: Art Adj N. The fixed position of adjectives is easily understood if we consider that they do not agree with the head noun of the noun phrase.

Second, and more importantly for our present purposes, freedom of word order only means that all the possible permutations of S,V, and O can produce grammatical sentences. In the terminology of the language typologist, however, there are still neutral or basic orders among these. With definite objects the basic order in transitive sentences is SVO, while the neutral word order with indefinite objects is SOV (Dezső, 1982).

The newer literature on Hungarian word order has tried to find some regularities behind this freedom. Works in the functionalist sentence perspective tradition starting from Dezső and Szépe (1974), Kiefer (1967), and Elekfi (1969) have all suggested that ordering is somehow related to the topic--comment organization of Hungarian sentences.

É. Kiss (1987) represents an attempt to deal with traditional speculations concerning the topic--comment motivation of Hungarian sentence structure in the recent framework of Government and Binding theory. In her formulation the terms Topic and Focus become syntactic positions, that is, landing sites for the elements effected by transformation, in an invariant syntactic configuration.

In the framework the base structure of a sentence would consist of an unordered set of major categories and the verb. Movement rules would allow the movement of one of the categories into immediately preverbal position which is the focus position of the sentence, the default option being the verb itself as focus. Another optional movement rule could move other categories before the focus thereby constituting the topic of the sentence.

The focus also carries the main stress of the sentence. Therefore, any structures which emphasize other elements than immediately preverbal one are ungrammatical.

The neutral, default option --- with no contrastive stress --- would be the verb itself as a focused element. Thus the simple sentence "The boy chases the girl" would have among others the following possible readings (1-4) in Hungarian.

is under development to assess the social speech intelligibility of hearing-impaired and deaf children. The test is the "opposite" of speech audiometry: the

(1) *A fiú kergeti a lányt.* SVO "The boy chases the girl."

(2) *A fiú kergeti a lányt.* SVO "It's the boy who chases the girl"

(3) *A fiú a lányt kergeti.* SOV "It's the girl the boy chases."

(4) *A lányt kergeti a fiú.* OVS "It's the girl the boy chases."

The facts are clear, not all linguists are happy with the interpretations, however. The system leaves the status of so-called basic or contextually neutral order obscure: it would predict verb initial sentences to be held the most neutral (no movement transformations are applied here), but for native speakers these structures are clearly marked. Some linguists argue that the basic SVO order should still be preserved in grammatical theory (Horvath, 1986); some others take issue with the exact formulation of the movement rules (Kenesei, 1984).

The traditional typological approach (Dezső, 1982) suggests that there are two basic word orders for sentences in Hungarian: SVO for definite objects and SOV for indefinite objects.

Agreement and Pro-drop

Correlatively with its agglutinative structure Hungarian has an elaborate verbal conjugation system with two types of agreement built into the system. Finite verb forms do agree with the subject in number and person, and also show an agreement-like phenomenon with regard to the object. Namely a different conjugation pattern is used with intransitive verbs and verbs with an indefinite object on the one hand and transitive verbs with a definite object on the other hand. This, of course presents the child with an important developmental challenge. The separation of the two verbal conjugations has to go hand-in-hand with a clear articulation of definiteness.

As a consequence of these agreement phenomena, Hungarian freely drops pronouns both in the nominative and accusative case. This is rather interestingly related to the way children coordinate their first conversations.

Good modern generative accounts on several chapters of Hungarian can be found in the volumes edited by Kenesei (1985, 1987)

PHONETIC ISSUES

(Ilona Kassai)

Research on the phonetic aspects of Hungarian child language during the period under review has been fairly varied with many different approaches represented. Linguistic performance has been analysed both for segmental and suprasegmental levels and for production and perception.

Prelinguistic vocalization

Prelinguistic development has been the topic of research conducted by the developmental psychologist Júlia Sugár Kádár since the early 70s. In a longitudinal study on the vocalizations of one child, the author proved by the analysis of intensity curves that on the level of suprasegmental features communication appears very early during the first year. Differential vocalizations produced in interactions with mother, father and toy tell about the child's partnership (1977). This finding is given ample evidence through the analysis of 5 mother-child dyads in different situations. The author emphasizes that the emotional "climate" of the dyads is reflected in the form of the sound pressure curve: tension is rendered by spikes while positive emotions are manifested by smooth curves (1982, 1988).

Early sound patterns

Segmental achievements of the early period have been examined by Mária Gósy (1978, 1981). Following the universal tradition of the description of the emerging sound system of the mother tongue of one child, i.e. in terms of syllable and segment types and that of order of emergence she gives a detailed spectrographic account. The framework is that of the adult system. The main characteristic of segmental productions is the lack of steady states. The author goes further and analyses phonetic variation (achieved by assimilation, dissimilation, substitution, metathesis and deletion) in morphemic strings: word stems and endings between 15 and 24 months in one child (1978). It turns out that a greater stability is characteristic of endings than of stems. The reason is by no doubt the functional load conveyed by endings.

Substitution phenomena or rather variations produced by one child in the period of the rapid increase of his vocabulary (18-21 months) have been described by Ildikó Molnár (1978). The governing principle of this variation seems to be the well-known 'ease of articulation'. The case of [r] --> [j] substitution is illustrated in one child by Asztalos and Szende (1976). The authors argue that while the child uses her sound

system lacking [r], she is aware of the differences her system shows as compared to the adult one. The evolutionary stages of the same "difficult" consonant [r] are traced from early babbling to 3 years of age in another child by Gósy (1979). The description is supplemented with spectrographic measurements.

Systematic studies on the elaboration of the sound system

The evolution of the sound system of the Hungarian language is presented in the light of cross-linguistic evidence by Zsolt Lengyel. The second chapter of his book (1981b, 105--177 pp.) deals with prelinguistic development and the second year of life. The overall issues are supplemented with evidence based on the analysis of speech samples of Hungarian children. The parallel description of the sound inventory of two children at one year of age and three children at two years of age reveals both the common points and the individual differences of the development. The third child involved is the one whose sound patterns are described in detail by Meggyes in the first chapter of her book on the linguistic system of a two-year-old child (1971, 9--25 pp.). A brief anticipation of this book was presented at the first meeting on child language research held in Brno in 1970 (see Meggyes, 1972). The three-year-old stage is the topic of discussion in the booklet by Mária Gósy (1984a). After a short account of the sound repertoire of 30 children between 3;0 and 3;3 involved in the study the author presents measured data concerning duration, intensity and formant frequency of the speech sample of one child (pp. 15--42).

These descriptions support the claim that language specific items are acquired last. This is the case in Hungarian for the feature of length. By durational measurements of communicative utterances on the one hand and late babble on the other hand Ilona Kassai demonstrates that in the one word utterance period, despite the varied timing of babbled sequences there is hardly any sign of the emergence of short/long opposition in vowels and even less in consonants within communicative strings. The reason is then phonological, not physiological (1988). Another specificity of the Hungarian language, the phonotactic constraint of vowel harmony operating within the boundaries of the word is discussed by Mária Gósy (1989). She presents evidence that children do not make errors in applying harmony rule either within or across morpheme boundaries.

In the material of scattered child language sources published in Hungarian within the past 100 years Andrew Kerek worked out rules underlying the phonological development of Hungarian children. These rules are interpreted as simplifying the child's output to a level of complexity consistent with his maturational phonetic constraints and are listed by Kerek in support of their cross-linguistic generality and of the Jakobsonian theory of 'irreversible solidarity'.

One of those simplifying processes, the phenomenon of consonant harmony is analysed in depth by Ilona Kassai (1981a). She concludes that consonant harmony is to be considered as a syntagmatically motivated processing constraint pointing to the lack of autonomy of the individual sounds within word and larger unit boundaries. This conclusion and the observation that children having received speech therapy prove to be more successful in learning to read than their normal peers led the author to another conclusion, namely, that the phoneme as an abstract entity has no psychological reality until about 6 years of age (1983).

Speech perception

As far as perception is concerned, Mária Gósy, after a survey of the beginnings of speech perception (1984a), examines the interaction of hearing and speech understanding in 24 6-year-old children and 34 16-year-old adolescents and claims that a high level of understanding predicts good reading and foreign language learning skills (1984b). The development of comprehension skills was tested in 7 age groups ranging from kindergarteners to adults (Gósy, 1987). The main finding of this experiment is that with increasing age the role of low level perceptual mechanisms decreases. This correlation was tested in another task (Gósy 1989).

Suprasegmental aspects

The suprasegmental approach has been represented by the work of Iván Fónagy, Ilona Kassai and Júlia Sugár Kádár. While the first two have focussed on prosodic phenomena from a linguistic point of view, the latter has been interested in the prosodic aspect from the perspective of developmental psycholinguistics.

After a short notice about the primacy of intonation both in production and perception in child language (1979a), Ilona Kassai discussed its emergence on the basis of measurements of fundamental frequency and intensity curves in the one word utterance period (1979b). The linguistic determination of the features examined was brought about by the comparison of utterances aiming at communication and those considered as late babbling. The utilization of fundamental frequency was investigated from another aspect, in an experiment aiming to find out the impact of singing on the development of the speech of children in day care centers (Kassai 1983). Iván Fónagy (1972) captures the moment when two successive one word utterances happen to be integrated by the Fo curve into a two word utterance. Later on, in an interesting attempt (Fónagy, 1975), he establishes a parallel between the child's utterances on half-way to prosodic integration and certain types of syntactic dislocation observable in the adult language use of Hungarian and French. The emergence of stress is the topic of another, instrumentally and perceptually based study by Ilona Kassai (1981). The main findings

concerning the prosodic achievements of the one word period are summarized in English (Kassai, 1988). The author further deals with the interrelation of intonation and syntax with respect to question acquisition between 1 and 3 years of age (Kassai, 1987). Variation in stressing in the same period has also been briefly discussed (Kassai, 1988).

Prosodic development has been followed up by Júlia Sugár Kádár in 60 kindergarteners, first graders and second graders (20 in each group) for production and perception of the basic sentence modalities. In the experiments she analyses such features as reaction time, duration and intensity of verbal responses, their frequency of occurrence, quality of breathing. From the recordings it becomes obvious that non-referential sentences show far more variation in their non-segmental shape than referential sentences. The results of the study are discussed at length in Sugár Kádár (1985).

Evidence concerning segmental and suprasegmental approaches was presented by Mária Gósy, Ilona Kassai and Tamás Szende (1982) in arguing for the validity of some principles hypothesized in language acquisition processes.

ACQUISITION OF GRAMMAR

(Csaba Pléh)

In the organization of the material in this chapter, we go through different aspects of grammar. That means that some studies will show up several times, and also, that concerning the same aspects first observational studies will be described followed by experimental work. The latter shall mainly concern studies on sentence understanding.

Overviews and general descriptions

One detailed case study should be mentioned to begin with because it covers most aspects of grammar. Meggyes (1971) in her monograph describes the language of her two year old daughter. Although the study is organized and written according to traditional descriptive grammatical categories, and the observations are occasional diary notes, the work, being the only full published monograph-like work on all aspects of language in a single child, can be used by all researchers to formulate hypotheses concerning grammar.

Réger (1990) in her sociolinguistic study on the influence of maternal speech styles in different social groups presents interesting observational data from longitudinal observations on the free speech of 24 children at three age levels (1;0-1;3, 1;8-2;0 and 2;8-3;0). She reports descriptive statistics on the increase of MLU and inflections. The study also analyses the speech samples according to sentence types, questions, case marking, word order etc. Although at present the data are only analyses to deal with maternal influence on children's speech, the descriptive data can be used as starting points for 'purely' grammatical studies as well.

Studies on word order

Theoretical papers

In the early seventies, following upon his earlier work, the linguist László Dezső (1967, 1970, 1976, 1982) was the first to propose an analysis of early Hungarian sentence patterns according to the classical **functional sentence perspective**. Based on selected utterances from diary studies he has basically claimed that the word order patterns observed in early utterances can be explained by reference to the topic-comment articulation. Single word utterances are comments on a situational topic while early two-word utterances as realizations of a universal Topic-Comment articulation based directly on deep structure patterns (the latter being expressed in Fillmorean case grammar terms by Dezső).

Empirical studies

Diary work and case studies. Part of the studies here are simple statistical descriptions of surface word orders. Lengyel (1981a) describes a study of picture description in children between 3 and 7. He tallied the different S,V,O permutations and concluded that word order variability decreased after 3 years of age, and SVO was dominant overall in all age groups. Some minute details are also given about the stress patterns found. Unfortunately, the statistical details are presented in a rather cursory way. Later on, in his dissertation Lengyel (1982) has presented more data including older children as well on the use of word order strategies both in picture description and in interpreting sentences with no case marking. An overall SVO preference was observed together with contextual determinants of order in picture description that followed expectations from the functional sentence perspective framework.

Réger (1986a,b) followed a very productive road in a longitudinal case study of two children between 1;7 and 2;3. She has combined the issue of the appearance of Topic and Focus in early child utterances with the issue of the use of imitation by children in acquiring grammar. (Note that the use of the Topic and Focus notions here corresponds to the newer versions of generative grammar as proposed by Katalin É. Kiss (1987) rather than to the traditional functional sentence perspective applied by earlier studies.) She has observed that from this perspective focus imitation seems to be dominant in children. One can assume that this - supported by the phonetic saliency of the focussed element - is an important factor both in the road towards an articulation of the structure of multiword Hungarian sentences and towards conversational competence where focus directs coherent reactions.

Experimental works. In an experimental setting, the psychologist Anikó Kónya (1990) compared recall as well as reconstruction in drawings of sentences with different word orders and with different argument structures. She had shown in preschoolers a strong preference of SVO and a strong influence of order on the psychological salience of arguments. Fronted nouns were represented in pictures as much greater compared to sentence final nouns. Thus, word order has a strong influence on the mental representation of a sentence.

Csaba Pléh has studied order together with other factors of sentence interpretation in children between 2;6 and 6;5 in a long series of experiments, mainly using the sentence enactment paradigm. The basic results concerning order and the setting parameters of the use of order could be summarized as a list of factors:

(i) Beside relying on the dominant case marking, Hungarian children do use a supplementary order-based strategy in sentence interpretation. In preschool age children this strategy is over-extended even to cases where it is contradicted by the dominant and clearly grammaticalized factor determining interpretation, by case marking (Pléh, 1981a,b; Pléh and MacWhinney, 1985; MacWhinney, Pléh, and Bates, 1986).

(ii) When case is missing due to structural options in the language, order emerges as a strong second determinant of interpretation (ibid.)

(iii) When the case ending is perceptually difficult to identify in a transitive sentence, a characteristic interaction emerges between word order and case marking. An SVO pattern is expected, and if the marking is perceptually uncertain, nouns are forced into this pattern. Sentence initial objects tend to be misheard as subjects, while sentence final subjects and nouns with suffixes that are similar to the accusative, are misheard and misinterpreted as objects. Unmarking and difficult marking increased the use of order (MacWhinney, Pléh, and Bates, 1986; Pléh, 1988, 1989). Similar interaction was observed in a bilingual study by Pléh, Jarovinskij, and Balajan (1987) that is discussed in the chapter in bilingualism.

Experiments of this kind cannot answer in themselves the question of origin. We can only conjecture but do not dare to conclude that the use of order originally emerges in connection with unmarking and difficult marking.

(iv) In Hungarian children, the development of dichotic asymmetries seems to be related to the disappearance of order based misinterpretation and to a finer analysis of difficult allomorphs.

On the basis of these latter data, Pléh (1981a,b; 1989) proposed the hypothesis that one has to postulate a shift from a more holistic towards a more analytic and localistic interpretation strategy in Hungarian children.

The sentence interpretation model on the whole seems to be a mixed one combining morphology and order even in adults.

(v) Social class had no effect either on the use of order or on dichotic asymmetries in similar studies (Pléh and Vargha, 1982, 1984).

Studies on the prefix system

Verbal prefixes have a central role in the syntactic structure of the Hungarian sentence as well as in the semantics and pragmatics of communication. Primarily they express perfection of action and different locative relational information. In a sentence without contrastive focus (flat intonation contour) they are attached to the verb. More precisely, they occupy the critical immediately preverbal slot (the Focus slot). They are mutually exclusive with other preverbal modifiers like bare nouns in focus. In marked sentences, where another element comes into focus, the prefix is separated and occupies a postverbal position. (See the books edited by Kenesei for details.)

Syntax of the prefixes. The diary literature (e.g. Meggyes, 1971; Lengyel, 1981b) contains several interesting observations on the early 'incorrect' use of prefixes in negated sentences (the child first does not separate the prefix), and the study by Réger (1986a,b) had shown that as part of the acquisition of the dialogue rules of answering and commenting with the focus, young children learn very early on to be relevant by continuing conversation with the use of the focussed separated prefix, like the example under 5 and 6 shows. (5) corresponds to an immature, while (6) to a mature system.

- | | | | |
|-----|-------------|----------|--------------------|
| (5) | Q.: Elment? | A: Ment. | non-focussed main |
| | away-went | went | |
| (6) | Q.: Elment? | A: El. | focussed main verb |
| | away-went | away | |

Pléh, Ackerman, and Komlósy (1989) performed a systematic experimental study on the syntactic position of preverbal modifiers. In an elicited imitation task preschool children were asked to repeat relatively long sentences with prefixed verbs. In a counterbalanced design prefixes were either in their 'canonic' preverbal position (7) or moved to sentence final position (8) with several arguments or free adverbial constructions separating them from the verb.

- (7) *The little pig happily upclimbed the mountain.*
 (8) *The little pig climbed happily the mountain up.*

Syntactic constructions with a prefixed verb were treated by children with reference to a canonic order. Structures like (8) were turned into structures like (7) in 65 %, and adjectives and adverbs were omitted much more frequently in (8). Several other structures which are also verbal modifiers (i.e. restraining the meaning of

the verb with a preverbal object, like He coffee drinks) behaved in a parallel way supporting the claim that a broader syntactic class is formed by children early on. As further support of the more abstract category, when faced with ungrammatical sentences with two modifiers (e.g. a prefix and a preferably preverbal adverbial construction) children reduced the ungrammaticality. Either they changed the verb into a non-prefixed one or changed the argument.

Semantics of the prefixes. How do children learn the varied uses of this syntactically unitary category? As a step towards answering this question Pléh (1990) asked preschoolers to describe action relevant pairs of pictures. The first picture in each pair presented a continuous action while the second one its perfected pair. Over the 11 picture-verb token pairs children from the earliest time on used a combination of past tense and prefix for the perfected action, while for the continuous action typically present tense without a prefix was used. Other means to express perfectivity (e.g. adverbial structures) were also used in 25 %. An item analysis showed that the occasional use of prefixed verbs for continuous actions depended upon the action to be described. Children used prefixes to describe momentary actions like open, or with resultative verbs like *water, fix, comb, cut*.

Thus, the studies seem to support that Hungarian children control verbal prefixes from very early on, making many 'smart mistakes'. The use of prefixes to express perfectivity is very mature and sensitive even in 3 year olds. Prefixes do have a preferred syntactic position for the child and they seem to enter into a larger category of verbal modifiers. At the same time, prefix movement and other prefix operations are first conditioned pragmatically rather than syntactically.

Early grammatical categories

Concerning the appearance of early syntactic articulation, in the seventies several authors have followed upon the lead of Fillmore (1968) and tried to categorize early utterances according to **case grammatical relations**. This fashion of looking for agent, object, instrument, experiencer etc. in child utterances had two motivations. First, in Hungarian generative grammar proper, especially in the work of Dezső (1967, 1970, 1982) and his followers a typological approach based on Fillmore concerning prototypical expressions of certain frames has become very widespread around that time, and second, the English based case grammar descriptions in child language (e.g. Schlesinger, 1971; Brown, 1973; Bowerman, 1974) were rather inspirational as well. A critical examination of this literature covering the language and cognition issue as related to case grammar was given by Pléh (1986).

The empirical studies usually did not go into the intricacies of the debates around case-like categories. They have taken childhood utterances as evidence for the universality of a certain deep structure. The works of Dezső (1967, 1970, 1976) which started this kind of description merely presented a taxonomic listing of different case grammar relationships in childhood utterances to support the universality of a fillmoreian deep structure.

Lengyel (1981a) in his scholarly book as well as in his popular survey (Lengyel, 1981b) has supplemented this listing with percentages. Interesting descriptive data can be found in his works both on the frequency of different patterns in two-word utterances (agent-object etc.) and on the frequency of different simple usages of utterances (like naming, location, reoccurrence etc.).

Réger (1986b, 1990) gives interesting other data on early utterance structure between 1 and 2 years. Her data seem to support an early Topic - Focus based structure in Hungarian children and present an interesting dialogue framework to study early two word utterances in Hungarian children. On the whole, however, there is relatively little new research on early sentence patterns in Hungarian.

Acquisition of the morphological system

As was mentioned in the grammatical introduction, the rich agglutinative system is a rather remarkable feature of Hungarian. Most studies in this area deal with noun morphology: some of them relate to the issue of the acquisition order of the different endings, while others with allomorphy.

Acquisition order

The classical data are reviewed by MacWhinney (1976). Only what is new compared to this shall be summarized here. Most of the case studies report relevant observations (e.g. Meggyes, 1971; Lengyel, 1976) on the earliest markings. Réger (1990) also has some summary tables on the emergence of inflections. Lengyel (1981a) presented a detailed analysis of different oppositions emerging in his own son, and supplemented it with observation from other diary studies. The basic cognitive oppositions accounting for the emergence of cases in his analysis are supposedly definite-indefinite, central-peripheral, and dynamic-stable.

Gósy (1984a) in her monograph gives a careful descriptive account of the early emergence of different grammatical morphemes based in free speech samples from 50 nursery school children between 2;7 and 3;3. Her data can be used as a starting point for detailed study of certain morphemes.

Few if any experimental studies were done in this field. Recently, as part of the development of a testing method for grammatical maturity in children between 3 and 8, Pléh, Palotás and Lörík investigate the use of

spatial cases in children to describe object arrays. Their most interesting results with regard to the general course of acquisition revealed that object internal relational case markers (in type) are easier for younger children than surface ones (on type). The basic reason is that in the expression of 'surface relations' there is a strong competition between case markers and postnominal adverbial expressions. The latter ones do not exist for 'internal relations'.

Nominal allomorphy

In this area the most interesting results come from experimental studies. The international world knows of MacWhinney's (1978) basic results here. Some other research used a similar paradigm as well. Réger (1979) in a study used a Berko type test with different Hungarian allomorphs in monolingual and bilingual children observed that the pattern of mistakes was the same for Gypsy children acquiring Hungarian after 5 as it was for younger Hungarian monolinguals. Morphological difficulties seemed to follow a stable pattern independently of previous language experience. Of course, the bilingual group went through the same stages with much greater speed.

Pléh, Palotás, and Lőrík in their ongoing research on early language testing found that nominal allomorphy in a picture naming task (with real objects and real nouns) is a very sensitive indicator of linguistic maturity. It differentiates between groups according to age, social background and retardation. This comes out especially clear if the difficult allomorph stems are put into the plural and the accusative at the same time, i.e. when the child has to control over two agglutinated morphemes simultaneously.

It was mentioned above already that allomorphy is a sensitive determiner of understanding as well. Stem classes that cause perceptual difficulties in dependent cases lead to more misinterpretations.

LEXICAL AND SEMANTIC DEVELOPMENT (Csaba Pléh)

In this area, most of the research is based on practical considerations rather than on theoretical issues related to specificities of Hungarian. The need for vocabulary studies in special education, language teaching, mother tongue education and the like is of course a genuine concern. But the data obtained with these aims in mind do not have too much to offer for the international audience. Theoretically more interesting studies on specific issues like the development of certain semantic fields, under - or overmarking due to cognitive reasons are mainly waiting to be done in the future.

Descriptive vocabulary studies

Again, the diary literature of course carries many data and tallies about the early vocabulary. Some of them deal with part of speech differences in early language (e.g. Lengyel, 1977).

Gósy (1984a) present vocabulary data analyses according to part of speech in a study based on free speech samples from 50 3 year old children. Most of the extensive descriptive studies were done with older children, however. Yvonne Csányi (1976) has adapted the Peabody Picture Vocabulary test for use with deaf and hearing children. This adaptation which was not too successful in all respect, was later on used in studies on bilingualism (Jarovinszkij, 1980) but in an extended way. Jarovinszkij applied the same set of pictures not only for the original purpose (screening passive vocabulary) but to obtain data on the active vocabulary as well (see more below under bilingualism) Some details of his data will be seen in the chapter on bilingualism.

Recently József Lórik of the College for the Teachers of the Handicapped together with Gábor Palotás and Csaba Pléh launched a more exhaustive vocabulary study. Based on a presampling of children and teachers between 3 and 8, they have constructed a carefully balanced picture set over a 100 pictures to elicit rare and frequent nouns, verbs, adjectives in the above age range. Data obtained from over 1000 children are analyses now according to lexical factors and social parameters determining the active vocabulary.

Descriptive vocabulary studies using other tasks

In this group, the most ambitious projects is the **associative vocabulary project** organized by Ferenc Pap and Zsolt Lengyel. The published volumes give descriptive free association data over almost two hundred items in school children (Jagusztinné, 1985) and college students (Balló, 1983). The most frequent associates are given in Russian and English translations as well.

Júlia Sugár-Kádár (1970, 1985) reported many data on the vocabulary distributions (parts of speech, fluency, type/token relations) found in preschoolers in CAT story descriptions, tale continuations and retellings as well as during free play. Her data show interesting age trends and contextual effects (more nouns in picture descriptions, verbs in other tasks) on the relative verbal and nominal styles. Similar data were reported on 8 to 10 year olds by József J. Nagy (1978).

In the book edited by Sugárné-Kádár (1985a) several papers reported studies on the vocabulary observed in picture description and picture commenting tasks. Meggyes (1985) reported the part of speech distribution of 6 year olds in describing complex event pictures, while Reök (1985) using similar pictures analyses data also according to the type of question (what is happening, what is he doing etc.). An interesting part of his study

was the use of contemporary street photographs to elicit speech besides the more traditional line drawings. Sugárné-Kádár (1985c) in the same series of studies also reported data on preschoolers and early elementary school children on describing pictures with emotional expressions.

Semantic studies

Only two relevant recent studies are available in this area. In an unpublished series of experiments Anikó Kónya studied the relationships between the development of the memory system and associative semantic organization in 3 to 6 year olds. On the basis of an analysis of answers to a free-association like task she has proposed a characterization of answers into individual episodic, script like and categorical. She claims that the traditionally held reorganization of the lexicon that is witnessed in the syntagmatic-paradigmatic shift could be interpreted as a change from idiosyncratic episodic through conventionalized episodic towards categorical. Thus, the shift is not directly from episodic to semantic. Rather, there is a conventionalization of episodic coding that follows early experience bound episodic reactions and the mature categorical system comes only after this.

SOCIAL SETTING OF ACQUISITION

(Zita Réger)

The microcontext of acquisition

Few real research is done on the conversational aspects of acquisition, although both in case studies and on the theoretical level the pragmatic-dialogic nature of acquisition is recognized by all. Réger (1986a,b) is one notable exception. In her longitudinal study of two children already mentioned she has taken a conversational approach. Her most important findings relate to the changing and varied role of imitation in children. First, she had presented extremely rich data on the "learning role" of imitation. The study showed that children tend to use imitation in a flexible way to practice items and structures that are at the most sensitive moment of development at any given time. Thus, she had shown for example by total vocabulary counts how a child practices new words. Second, she has shown how imitation gradually develops from a learning device into a conversational device. As a most clear example, with a careful control over suprasegmental factors she has shown that early echolalic imitation of the last word of an utterance in Hungarian gradually gives place to repetition of the focussed element, and then questioning of the focussed element which are standard conversational devices in Hungarian. Thus, what was originally a sign of immaturity (imitation) gradually becomes purposeful and syntactically conditioned repetition. (See the example in the word order section.)

This kind of work is continued both in her longitudinal research on mother-infant dyads which has a clear conversational emphasis and in her work on the acquisition of communicative competence in Gypsy children. These works are reviewed elsewhere in this booklet.

Studies on social class differences

Studies classified under this heading could be characterized as dealing with the macro-sociolinguistic setting of acquisition while the ones in the previous section as dealing with the micro-sociolinguistic setting. Studies of social differences in children's language use started in Hungary within the framework of Bernstein's theory which had a great impact on sociological and educational research in Hungary in the early seventies. Pap and Pléh (1972, 1973) had the aim to test Bernstein's theory of codes under Hungarian conditions. Their studies tried to answer the following

questions: (1) can the differential code use described by Bernstein be found in the speech of 6 year old Hungarian children, and (2) if yes, are they to be related to SES differences? 65 first grade pupils in 5 Budapest schools were given different linguistic tasks. In analyzing the general level of speech and its degree of elaboration the authors used measures worked out partly by themselves, tuned to specificities of Hungarian, like exophoric and anaphoric zero subjects and the like. The results were analyses in relation to school, parental profession, social situation, residential area, and sex. Differences attributable to differences in social status were found, while no connection could be established between them and the measured intelligence level of these children.

Sugárné Kádár Julia (1986; Sugárné Kádár and Reök, 1985) investigated factors determining the language use - among them social differences - of Hungarian kindergarten children. In the full research design, 436 4-6 year old children from different social backgrounds were studied. Children performed a series of tasks which measured different aspects of their language use in different communicative situations. Data obtained were correlated to data on psychological maturity, types of family structure, previous history of institutional socialization, SES differences, residential area and sex. Age related changes were also analysed. To mention some results: manifold interrelations between SES and language was found in these children, especially in vocabulary use and text production. Language development, in general, proved to be slower in the socially disadvantaged group. With regard to sex differences, girls performed better in articulation tasks and dialogues, while boys had better scores in narrating. The importance of the availability of manifold communicative experiences for children's language development was particularly stressed in this book.

Csaba Pléh and András Vargha (1982, 1984) investigated the effect of socioeconomic status in Hungarian children of kindergarten age (n=113) coming from different social backgrounds on dichotic ear preference and on the interpretation of simple sentences of varying word order. The main results have shown that in Hungarian children of that age the social background and sex of the child are not related either to sentence interpretation performance or to dichotic ear preference. The authors argue on the basis of these results that the origins of social class related linguistic differences must be looked for not in the basic linguistic abilities, but in the more complex social factors of language use.

Réger's longitudinal study (1990) investigated social variation in input language addressed to children and its effect on children's language development. Two groups of mother-infant dyads (24 altogether, from opposite extremes of Hungarian society) were followed through two years and grammatical characteristics of speech to 1-, 2- and 3-year old children were analysed. (The full research design included analysis of discourse and conversational features as well.) Results showed that

similar changes occurred in the speech of both groups of mothers in a number of grammatical variables as a function of their children's growing linguistic sophistication. A main effect of SES was found for a number of mother variables and also for children's MLUs. Greater frequency of imperative sentences and a relative delay in the introduction of reference-establishing means were found to be the most important features of uneducated mothers' speech, as compared to that of educated ones. Both of these features were found to have a slow-down effect on children's language development. Language specific factors were found to contribute to the impact of the use of some reference-establishing means on children's language development. The author suggested that one factor in the emergence of the developmental lag in children's development should be low SES mothers' relative delay in the introduction of particular features which would promote the acquisition of particular structures at the given developmental stage. Social group differences in mothers' speech were also related to different interactional styles which seemed to be dominating in the respective groups. It was also suggested that differential use of the reference-establishing means in different social groups may probably also be related to later emerging differences in the use of decontextualized language as well as in cognitive orientation.

BILINGUALISM AND EARLY SECOND LANGUAGE

(Alexander Jarovinskij)

Beginning from the 1970s, there are two main directions of studies on childhood bilingualism in Hungary: psycholinguistic researches of individual bilinguals (case studies and experimental work) and psycholinguistic and sociolinguistic studies of natural bilingualism mainly of children coming from the Gypsy community.

Individual bilingualism

Most of the studies here were performed on children who had simultaneously acquired two languages: Hungarian and another language which is not part of the natural sociolinguistic environment in Hungary, i.e. that is not a language spoken by an ethnic minority in Hungary. That is important to point out in the beginning because this language situation has a restrictive influence on the bilingual situation of the children studied. Some of the works here are case studies with more or less scientific sophistication, but some of them are carefully planned experimental and survey-type works on carefully selected samples.

Case studies

As to case studies, I would like to mention László Ódor's book Balázs learns to talk (1980). The author describes a process of becoming bilingual of his own Hungarian-born son. The family moved to Berlin for two years, when Balázs was about two years old. In this book we can follow the acquisition of German language, can see the problems connected with the psychological and social adaptation of Balázs to German nursery school. The book was published in Hungarian and addressed a broad audience.

K. A. Wodala's study (1985) is dealing with the development of **reading skills in an English-Hungarian bilingual child**. The subject of this research is her son, Mark, who was born in Hungary. English reading was started, when he was about 5 years old, and Hungarian reading, when he was about six.

Mark could be described as a well-balanced bilingual. He learnt both of his languages in ways that monolingual children learn: he has learnt English from his parents and Hungarian from his environment, attending Hungarian nursery school. His command of both languages at the time of the study was more or less equal. By the time Mark started school at the age of 6, he was quite proficient in both languages. His ability in Hungarian compared favourably with that of his peers. His mistakes

in English were similar to those made by monolingual English children.

K. A. Wodala analyses Mark's reading strategies in both languages in detail, paying special attention to **misreadings**. She categorizes this type of mistakes into some groups: misreadings involving common letters, cases of confused letters involved those with a round shape and a tail up or down, e.g. *d* and *b*, grammatically possible and impossible misreadings and others.

I would like to give one example. Most confusions were caused by the presence of common letters, usually at the beginning of the word. Obviously the initial letter gains in importance once the child knows he should read from left to right, even though he does not always do so. Mark confused *boy* and *big*, *can* and *come* involving the same initial letter. The fact that one word is slightly longer than the other seems to have less importance in a child's eyes than an adult used to reading, might think. The initial letter is all-important for the child. This is borne out by Mark's later confusions between words of different length.

The fact that Mark was taught to read two languages was beneficial for his progress in both languages. Reading has helped his proficiency in English and in Hungarian as he takes note of new words and more advanced syntax and uses them in speech.

K. A. Wodala suggest that it is more helpful to the bilingual to teach him/her to read both languages and assist him/her to transfer his/her skills from one language to the other.

Alexander Jarovinskij followed the bilingual development of his own son for a long time. Several sophisticated case-study papers have come out of this interest. In Alexander Jarovinskij's and Ildikó Fabricius's study (1988) some observations concerning the development of bilingualism at early childhood are reported with special respect to analyzing **communicative competence** and to the linguistic functions of communicative processes of Igor, their first born bilingual son. Igor has been living in Hungary. His mother is Hungarian, his father is Russian. Observational data are reported from the period between (1;8) and (2;1) years of age. Igor has been brought up in a home environment from birth to the end of the investigation phase.

A consciously followed principle of communication with the child from his birth was the scheme of Ronjat: **one person -- one language**. The father participated in all procedures of care giving (bathing, feeding, playing games, walking and the like) to the possible greatest degree.

Duration of exposure to both languages through taking care of the child was approximately equal. First words were recorded in both languages at the same age level (11 months). From the age of 15 months, Igor was enabled to have recurrent daily acquaintance with both Hungarian and Russian story books and gramophone records.

Protocols of his speech production unambiguously show that the use of suffixes was first manifested at the age of 1;8 years.

Here are some conclusions concerning communicative competence from Jarovinskij's research:

(i) The two language systems show an approximate balance all along the period reported (age 1;8 to 2;).

(ii) The use of the inadequate code was observed with the bilingual child in connection with a dominance of the **situative function**. Even if prompted by a question of the Russian-speaking father (e.g., the equivalent of *What have you done today?*), an experience originally associated with the Hungarian language will usually be told via the inadequate code (in Hungarian, as in (9)).

(9) Age (2;0,12).

Father (in Russian): *What have you done today?*

Igor (in Hungarian): *Játszottunk és ettem almát és banánt is, azután kugliztunk. Bizony!*

"We were playing and I ate apple and banana. Then we played skittles. So it was."

If a question is formulated by the Hungarian-speaking mother concerning an experience associated with the Russian-speaking father, the same phenomenon will emerge. The Hungarian question elicits a Russian response.

As a consequence of a dominance of the situative function, the child remained -- at least in these communication processes -- within the language system connected to the situation experienced.

(iii) If the child turns to the father in order to ask for some object to be handed over, or activity performed, the **conative function** will dominate. In these cases, Russian code will be used. Confusion of the two language systems, or switches to the Hungarian code were not recorded in such cases. The child tried to confine verbal behavior to one language system. In order to keep to this as long as possible, he utilized all available verbal or non-verbal means, as (10) illustrates.

(10) Age (1; 10,18). Igor asks for a ball among the toys on the toy shelf.

Igor: *Papa, daj mne etu!*

"Daddy, give me that (one)."

/ (Points at the ball.)

Father: *Sto -- etu ?*

"Which one? -- this one?"

Igor: *Etu, papa !*

"That one, Daddy!"

/He is gesturing and shouting excitedly.

Father: *Kakuju etu?*

"What kind of that?"

Igor: *Papa, pozovi mamu!*

"Daddy, call Mommy (here)!"

When the mother appears, Igor says to her in

Hungarian:

Add ide azt a pöttyös labdát!

"Give me that dotted ball.")

A similar phenomenon could be demonstrated for Hungarian, too.

(iv) The separation of the two language systems is further illustrated by phenomena of *children's interpreting*. According to the protocols, a first case of spontaneous situative interpreting occurred at the age of (1;7,5). Having caught sight of a cat, the child turned consecutively to each of the parents and verbalized the sight in the respective languages.

From spontaneous, situative one-word translations, he proceeded to the level of **translating schematic sentences**. A stereotyped character of these sentences was predicted by the fact that both situations and their linguistic representations had previously been repeated numerous times. The stereotypes frequently served no more purpose than that of establishing contacts or leading to social interaction. Igor received, e.g., the home-coming father each time for a longer period with the words *V futbol igrat!* (Russian for "(Let us) play soccer!"). If the father proposed some other activity the child readily cooperated. The sentence schemes were used, consequently, as ones dominated by the *phatic function* of speech communication.

Translations near to the level of, or suggesting the involvement of abstractions (e.g. delivering a message) were introduced as follows. On being requested, the child turned toward the other parent. He sought options to avoid the task. Later he attempted to translate. (11) gives an early example.

(11) Age: 2; 0,18.

Father: *Skazhi babuske, sto u menja slomalas' pisuscaja masinka.*

"Tell Granny that my typewriter has broken."

Igor: (running to his grandmother and telling in Russian):

Pecatnaja masinka slomalas !

"The typewriter has broken!"

--- *pecatnaja* is a childish neologism.

Grandmo: *Nem értem.*

"I do not understand. --- in Hungarian.)

Igor utters the same in Russian loudly shouting and then continues with the Hungarian sentence:

Az autó ... megállt.

"The car ... has stopped.")

(v) A functional practice of both language systems was realized through monological speech in the intimate loneliness before falling asleep. Daily events were verbalized in this period alternately in both languages. Analysis of monologue contents revealed that the child never confused two linguistic signs within one structure. Monologues had a stratificational, layer by layer design. The utterances, served, on the one hand, as dialogues with imaginary partners -- persons, objects -- with which the child had real contacts during daily activity. On the other hand, monologues could serve a poetic function (word- and phonetic games) as well as the metalinguistic function of communicative processes.

Early second language contact ---acquisition or learning?
This is the title of Leslie Barratt's and Ilona Kassai's article (1989) about becoming bilingual of one of the authors' daughter, Elissa.

She was 3;9 when she arrived in Budapest for a 10-month stay. She had no command of a second language, although she had occasionally heard other languages, most often Dutch, spoken around her. Before leaving for Hungary, she learned the Hungarian expressions for the following: *no, yes, Watch out!, That's not allowed! Where's the bathroom?, boy, girl, mother, father, color terms and numbers to ten.* She arrived to Budapest and started in a Hungarian pre-school where none of the teachers or children spoke any English. She also attended a gym class twice a week after school, taught in Hungarian. E.'s accent was described as 'native' by Hungarian speakers, her Hungarian was good enough to pass for her as a Hungarian child. She could carry on full conversations with other children or adults without anyone knowing she was American. Outside of school, E. was exposed to both English and Hungarian.

Most of the data were collected during one day. A 2-hour recording was made with E. playing with Hungarian friends, sisters, Lilla, age 5;7 and Virág, age 3;0. The tapes revealed that her speech was not identical to that

of other Hungarian children of her age. Specifically, native speaker errors appeared that native children generally stop making by the time they are her age.

Before her contact with Hungarian the kinds of errors she was making in English were ones that might be considered acquisitional. They came from modals and tag questions (positive tag with positive statement) in syntax, from irregular verbs (e.g. *sawn* for *seen*) and so on.

After her contact with Hungarian, Elissa started to make the kinds of errors which cannot be considered native ones. For example: word order errors, like (12) and incorrect prepositions like (13).

(12) Word order error

Q.: *Where are they?*

A.: *There are they.*

Modelled on the Hungarian order:

Ott vannak. "There are --- 3rd Plural.")

(13) Prepositional government error

I'm afraid from the dog

Modeled on the Hungarian a *kutyá-tól* 'dog-from'.

One observation which is immediately apparent is that most of E.'s native-like and non-native errors in Hungarian were in the areas of phonology and morphology rather than in syntax. Another obvious generalization is interference errors from English. Some of her non-native errors, however, are clearly not from English. The vowel harmony errors and some of the underanalysis errors cannot be classified as interference so they might be considered as resulting from learning strategies. Supporting evidence from this interpretation comes e.g. from frequent self-corrections. To sum up, Elissa clearly has relied on universal strategies of language acquisition in order to learn Hungarian. However, some of the errors suggest that E. also relies on an analytic strategy different from that of a child acquiring a first language. This strategy produces non-native type errors, but ones which do not have English as a point of departure. For example, all of E.'s vowel harmony errors involve the vowel [e].

According to L. Barratt and I. Kassai, on the basis of the results of error analyses both in E.'s Hungarian and English performance, the question asked in the title of their paper cannot be answered with either one of the alternatives. Rather, both have to be used, substituting and for or. With respect to E.'s Hungarian competence, the authors state that discovery procedures characteristic of the acquisition process are paralleled by the knowledge of a language already acquired as well as the analytical approach characteristic of the learning process. On the other hand, E.'s strategies have changed

with respect to her native language than before, more actively involved in the acquisition process. On reflection, the distinction between acquisition and learning seems to be a highly sophisticated one.

Experimental work

Alexander Jarovinskij (1979, 1984, 1990) and with co-authors (Pléh, Jarovinskij, and Balajan, 1987) studied the **lexical and syntactic competence** and analyses grammatical errors of Hungarian-Russian preschool bilingual children in the verbal description of visual experiences, as well as in sentence comprehension. He has also presented data on the influence of background circumstances on bilingual socialization.

18 children (10 girls and 8 boys) coming from 15 intellectual mixed families all attending Hungarian nursery schools formed his sample that was divided into two groups. In group A consisting of 9 children, the mean age was 4;2, in group B (9 children) --- 6;1. All the children had Russian speaking mothers and Hungarian speaking fathers. The families have settled in various districts of Budapest for an average period of six years. All the parents had completed higher education.

Bilingual competence on the lexical level was defined, as a first step, by the range of receptive vocabulary and by the lexicon actually used. To compute a **dominance coefficient** for passive vocabulary, an adapted Hungarian version of the Peabody Picture Vocabulary Test (PPVT) and its Russian equivalent were used. The picture set of the same test was applied to gain dominance coefficients for active word use. Children's elicited speech was tested by 10 unrelated pictures, representing the play-world of children. The subjects were instructed to describe the pictures. Assessments were carried out in a playful home setting by two experimenters speaking the respective languages.

Three mean results showed that **the environmental language (Hungarian) dominated** in both experimental groups and this effect was stronger in group A.

In naming pictures (Peabody Picture Vocabulary Test), children demonstrated lexical interference with Hungarian words put into Russian contexts and vice versa, but this phenomenon was much more frequent in Russian than in Hungarian, especially in younger children.

There exist several immediate causes of interference: primarily the type of situation itself, the target of conversation, personal factors, etc. In every language there are some words which "suggest" or potentially carry the possibility of lexical interference. One group of these consists of words in the two languages which are phonologically similar and semantically identical. For instance, Russian *kljuc* -- Hungarian *kulcs* "key", *tort* -- *torta* "fancy cake". The younger group of children (group A) used only the

Hungarian equivalents of these pairs probably because their phonetic differentiation was poor.

Lexical interference may easily appear also with word pairs in which phonological shapes are similar or identical although the meanings are different. For example the meaning of the Hungarian word *puska* ("rifle" in English) is expressed in Russian by *ruz'e*. The phonologically similar Russian word *puska* means "canon".

Lexical interference will easily occur when the semantic equivalent of a word in the other language is phonetically simpler than the one in the language just utilized. Subjects may have lexical interference from the inappropriate language which have a great frequency in that language or pertain to an everyday experience. In Jarovinskij's material there seemed to be some pictures that can be easily labeled in one language but not in the other. E.g. words frequently met in household contexts, Russian *s'ët* "sews"; or words used in the external scene, e.g. Hungarian *zászló* "flag". The difficulty in labeling is witnessed by the set of so-called associative answers (e.g. in Hungarian *vág* "cuts" for the picture of a knife, in Russian *priceska* "hair-do for *scetka*, the picture of a brush. A similar tendency is revealed by the phonologically isomorphous, erroneous responses. E.g. in Hungarian *zokni* "socks" instead of *szoknya* "skirt", or in Russian *for kol'co* "ring" the answer *kal'sony* "underpants". Functional descriptions substituted for direct naming also seem to suggest that these bilingual children suffer from an insufficient degree of semantization in the case of words of the less dominant language.

The analysis of **picture description**, i.e. the verbal recoding of visual experiences, succeeded in confirming the existence of universal tendencies primarily stemming from the cognitive development of the child. The overcoming of one-word labels, that is, a shift from the "dialogical" describing towards connected discourse was evidenced characteristically in the case of six-year-old children.

The mastery of the two languages unavoidably affects the complexity of utterances. While the task of describing the picture, given in Russian was rejected by the children in several cases, no corresponding refusals were recorded when asked in Hungarian.

Grammatical errors shed light also on the strategies by means of which grammatical rules are acquired in the two languages. One error category can be directly related to the acquisition strategies, both in Hungarian and Russian. The errors assigned to this category have been called good or developmental errors as they are outcomes of rule overgeneralisation processes in word formation. The majority of such errors appear at the morphological level, not unlike those observed in the speech of monolingual Hungarian or Russian children. The coining of new words (neologisms) is also detected in both languages, especially in older children. Another category

of errors can be explained by transfer strategies. The items included in this category are interpreted as interference phenomena, in the form of borrowing either words or morphemes (word stems, markers). The error of borrowing was found to be much more frequent in Russian with younger children, while the margin was narrower with older ones.

Apart from lexical borrowing and lexical-semantic interference, the experimental material clearly indicated grammatical interference, too. In the latter cases grammatical models are transferred from one language to the other. A primary evidence for such transfers are translations sometimes termed 'calques'. The phenomenon is detected more frequently in Russian than in Hungarian. In the younger group, no items of calque from Russian to Hungarian are recorded at all. Linguistic calques tend to appear at junctures where codes are to be changed abruptly, i.e., when the child in the context of the Russian interview seems to be forced by the visual experience to start describing the picture in Hungarian and suddenly "changes his mind", repeating the Hungarian utterance(s) in a word-by-word translation to Russian. In most cases, structurally easier models of Hungarian grammar were found to interfere with Russian language use.

Sentence understanding. In the study of Pléh, Jarovinskij and Balajan (1987) the interpretation of transitive sentences with varying word orders (SVO, SOV, OSV) by Hungarian-Russian bilingual and monolingual preschool children was examined. Two groups of monolingual Hungarian children and two groups of monolingual Russian control children supplemented the subject pool.

The children participated in an interpretation task. They were required to manipulate equal-sized toys in response to a spoken sentence, in order to demonstrate that they understood the activity denoted by the sentence. All sentences were reversible and contained two animals as sole participants. Four transitive verbs (equivalents of *kisses*, *pushes*, *chases*, *lifts*) were used with four word orders (SVO, OVS, SOV, OSV) for each verb. Verb initial (VSO and VOS) constructions were not used because in Hungarian they are always contrastive.

The basic questions which addressed in this study were:

(1) Is there any evidence that Hungarian-Russian bilingual children employ a 'first noun as agent' strategy when word order is varied? (2) Are there similarities in strategy use between monolingual Hungarian and Russian children? (3) Which monolingual pattern do bilingual children follow?

The results showed a "first noun as agent" strategy in Hungarian-Russian bilinguals that was more pronounced in younger children and more marked in their Russian performance.

The role of word order, as well as misinterpretations due to the 'first noun as agent' strategy, seems to be weaker in bilingual children than

in monolingual Hungarians. A closer analysis of patterns of interpretation revealed the reasons for this secondary order based strategies in two case marking languages and the variations in strength of this strategy.. When the grammatical subject was in sentence initial position, the bilingual group performed at the same level as the monolingual children in both languages. The critical indicator of the proposed order-based strategy, however, was the mistaken interpretation of object-initial sentences (OSV, OVS). Bilingual children in Hungarian were more accurate at interpreting these sorts of sentences than their monolingual Hungarian peers.

The weaker tendency for bilinguals to use an order-based strategy may have the following explanation. Continual exposure to two different grammars may encourage bilinguals to develop sensitive and flexible strategies of sentence interpretation. In other words, their exposure to two 'coherent' systems encourages them to focus on the formal properties of each. In the languages under investigation, basic grammatical relations are expressed by suffixation. This similarity surely directs the children's attention to word endings, or, to put it another way, it reinforces the use of a strategy of language acquisition labelled Pav attention to the end of words by Slobin (1973). Due to the grammatical importance of suffixation in the languages, it may be hypothesized that bilingual children develop greater sensitivity to phonological cues in grammatically critical positions. In other words, morphophonological distinctions may be a general factor behind the more accurate interpretation of object-initial sentences demonstrated by bilinguals in Hungarian in both age groups, and in the older group (which is more proficient in Russian) also in Russian. The answer to the initial question, then, may be put as follows: the "first noun as agent" strategy appears in children acquiring case marking languages with a dominant SVO order; while this strategy appears in bilinguals as well, the additional attention paid to word endings on the part of bilinguals results in an earlier disappearance of this strategy; it also leads to the development of an alternative strategy based exclusively on case marking.

A post hoc qualitative analysis of the OVS and OSV Hungarian sentences supported these conclusions. In sentences formed on these patterns (as well as in subject-initial sentences), the nouns belonged to two stem types. In the first type, the accusative - t is directly attached to a stem ending in a consonant, thereby producing a consonant cluster (e.g. *oroszlán* "lion+Nom.", *oroszlán-t* "lion+Acc."). In the second type, - t is attached to a vowel where that vowel is either a permanent stem-final vowel (e.g. *maci* "bear+Nom.", *maci-t* "bear+Acc.") or a stem-final vowel produced by metathesis (e.g. *majom* "monkey+Nom.", *majmo-t* "monkey+Acc."). One might suggest that the variant which results in a consonant cluster is phonetically less salient than the variant which results in Vowel + t . (See about these factors in the grammatical chapter.)

It appears that these differences are important modulating factors for monolingual children. In the case of sentence-initial objects with phonetically salient endings (e.g. *maci-t*) mistakes appeared only in 18% of the cases. In contrast, object-initial sentences containing the less salient consonant cluster variants (e.g. *oroszlán-t*) exhibit approximately twice as many errors (35%). All of this is particularly interesting with respect to bilinguals: not only was the number of errors significantly lower, but phonetic differences seemed to have absolutely no effect in their case (8% vs. 8%).

A similar post hoc qualitative analysis of the Russian sentences also implicated the importance of morphophonological factors in the manifestation of word order effects. In some instances, the Russian object belonged to the feminine declension nominal stem class which takes the accusative allomorph -u. This allomorph seems to be a generalized object marker in early stages of acquisition. When the sentence-initial object belonged to this paradigm, mistaken identification accounted for only 10% of the readings for bilinguals and 12% for monolinguals (e.g. *B'elk-u celu'et t'igr+0* "Squirrel+Acc. kisses tiger+Nom.>").

In sharp contrast to these results it was found that in object-initial sentences with masculine declensional class objects (accusative allomorphs -a or -ja) errors increased to 27% in the bilingual and 38% in the monolingual group (e.g. *T'igra tolkajet koshka +0* "Tiger+Acc. pushes cat+Nom.>").

The marked degree of misinterpretation for masculine class-initial objects ending in -a may be attributed to grammatical homonymy (or pseudo-homonymy). To be precise, such a form could easily be confused with a usual nominative feminine form which similarly ends in -a. It should be noted here that the interpretation of sentence-initial feminine subjects is practically errorless.

Two further comments are needed here concerning the role of this sort of grammatical analogy. First, it appears to support the position of a **canonical sentence pattern**. The misinterpretation of a masculine object as a feminine subject only occurs when the object appears in non-canonical sentence-initial position. Furthermore, mistakes in object-initial sentences with a masculine object are especially frequent in the younger group of bilinguals (47%). The use of faulty grammatical homonymy is a function of language proficiency; in the case of bilinguals it is a function of language dominance. The younger group with less experience in Russian presents a paradoxical situation: their more-limited Russian vocabulary combines with the attention paid to the ends of word to facilitate the incorrect interpretation of words like *t'igra* as nominative. Thus, characteristic morphophonological features of both languages play a role in the manifestation of order-based strategies in Hungarian and Russian, as well as in bilingual children.

Concerning types of bilingualism, Pléh, Jarovinskij, Balajan propose a pluralistic view. They cannot but agree

with statements by Jakobovits (1968) or Imedadze (1979) to the effect that a categorization of bilinguals into 'compound' and 'coordinate' groups is a separation of purely theoretical nature. In the authors' view due to the dynamic nature of bilingualism the linguistic facility of every bilingual could be characterized in a virtual multidimensional space. This space could be imagined in the following way: one extreme of each dimension corresponds to coordinate, the other to compound bilingualism. In a single bilingual, variable degrees of command over his 'effective' second language can be represented as compound bilingualism at one level of linguistic description (e.g. lexicon, syntax, etc.) and coordinate at another.

In the sentence interpretation task, the behavior of bilingual children resembled that of monolingual children. In comprehension tasks, the bilingual children demonstrated an alleged universal and possibly cognitively-based strategy according to which there is a tendency for the first NP to be interpreted as the agent. Thus, the interpretation strategy in the Hungarian-Russian context, where the basic word order is the same SVO, seems to follow the mechanisms of compound bilingualism. This is only a subsidiary strategy, however. Morphophonological factors specific to the two languages play a decisive role; thus a picture corresponding to coordinate bilingualism is obtained. Hungarian-Russian bilingual children exhibit a twofold picture with respect to sentence interpretation tasks: in conformity with the image of coordinate bilingualism, the children rely on the different marking strategies of the two languages, while at the same time they follow common principles which rely on the common basic word order of the two languages. In comparison with monolinguals of the same age, their development in this field seems to go in the direction of increasing independence from this general, compound-order strategy towards a reliance on case. In comprehension they move away from compound bilingualism towards coordinate bilingualism.

Social-family factors in bilinguals. In Alexander Jarovinskij's research (1990) the social background of mixed-bilingual families, which took part in investigations mentioned above, types of intrafamilial interactions and communicative strategies, etc. were reconstructed by a questionnaire and interview. The questionnaire was prepared in two languages. It was filled in the respective languages without contact between parents. Results were factor analyses.

As it was mentioned above, in general, Hungarian was the dominant language of bilingual children. The level of dominance did not correlate significantly with their age and sex. Bilingual competence proved to be a dynamic phenomenon determined by a number of factors. Of utmost importance was the condition at which age level and under what environmental circumstances the acquisition of the language that is not part of the culture was started.

Ranking after this, the author identified the objective, external influences in the joint acquisition of the two languages as well as subjective, internal factors connected with the level of mastery in either of the languages.

The bilingual competence of preschoolers directly and very strongly depended on the child's language biography factor, which contained two variables: the age the child arrived in Hungary, and the frequency and length of visits to the Soviet Union. The structure of family factor determined Russian proficiency, too. The first-born children were more advanced in the language of the mother than were second- and third-borns.

Such factors are not similarly patterned in the two experimental groups. The majority of young children have had no direct experience in Russian language use as they have had absolutely no opportunity to stay in a geographical area where Russian is spoken. Internal conditions were again less favourable than in the older group. Children second or third in birth order tended to take part in social interaction with the Russian speaking mother much less than first-born children. In families with more than one child a paradoxical situation may emerge; children choose to communicate with each other solely in the language used in the cultural environment. In such a setting Hungarian becomes a 'language of the children'.

In the younger subjects, the language of the cultural context is not only growing dominant but serves as a support as well. The perceptual process of the child as well as concomitant categorizations take place within the system of the Hungarian language and are, at least partly, determined by laws of that language. In this way, Hungarian tends to organize and control modes of thinking in the child; she or he appears to see the world through a prism of Hungarian.

Older children are more advantaged in mastering the Russian language. They have had a much deeper experience in using the language as, with varying frequency and duration, 90% of them visited the Soviet Union. The structure of the family is again a factor assuring more opportunity for social interaction in Russian. In this group, 56% of the children were found to display balanced or nearly balanced bilingualism with a tendency toward the 'coordinate' form.

Two other factors --- "Russian culture" and "mother" directly and indirectly influenced the children's bilingual socialization. In this case, the main variables like mother's education (human or natural sciences), parental attitude and motivation towards Russian language, number of Russian interactions, were very important, too.

The quantitative and qualitative analysis of 5 types of **child-parent interactions** showed that interactions occur most frequently during play and reading. In the families under survey, the "one person --- one language" communicative strategy was not consistently employed. In the home situation, Russian language interactions were twice as frequent as Hungarian.

Studies of ethnic bilinguals

In Hungary, there are several large ethnic minority groups with particular language communities (German, Slovakian, Rumanian, Serbish, Croatian, and Gypsy). Each minority has a special linguistic situation that is related to the distribution versus concentration of the speakers, contacts with the respective majority countries, attitudes towards the minority language on the part of the minority etc. Although we have a situation of a few hundred thousand ethnic minority people, very little serious research is done on the linguistic socialization of their children. There are a few exceptions. Sándor Gyôri Nagy in connection with his language policy studies on the use of German and language maintenance in Hungary has some remarks on the acquisition of German. Vera John-Steiner and Alexander Jarovinskij did some work that still awaits publication on the facilitating influence on being bilingual in learning a third language in high schoolers who attended minority language high schools.

Much remains to be done in this area, as the remarks here indicate. The only seriously studied ethnic group from the point of view of language socialization is that of Gypsies.

On becoming a Gypsy speaker in Hungary

Zita Réger's studies (1979, 1988, 1990) are dealing with psycholinguistic and sociolinguistic aspects of bilingual children coming from the Gypsy community.

First of all a few words are needed about the situation concerning the Gypsy community in Hungary.

Gypsies in Hungary and their linguistic situation. The latest sociological survey of Gypsies in Hungary estimated the number of the country's Gypsy inhabitants as about 400 thousand, that is, nearly 4 per cent of the population in Hungary belong to this ethnic group. According to linguists' estimates, roughly one third of Gypsies in Hungary maintained their original mother tongue, Romăni, a language of Indian origin. Thus, Romăni-Hungarian bilinguals represent one of the greatest, if not the greatest, bilingual group among the different ethnic minorities in Hungary.

As the other linguistic groups within the Gypsy population in Hungary, an additional 8 per cent --- about 30 thousand people, the so called Boyash Gypsies --- speak certain dialects of the Rumanian language as their

mother tongue. The rest is monolingual linguistically assimilated Hungarian speaker.

The overwhelming majority of Romăni-speaking Gypsies belong to the Vlach dialect group. Speakers of this dialect immigrated into Hungary from Moldavia in the second half of the 19th and beginning of the 20th century. Subdialectal groups within this dialect, e.g. Masari, Drizari, Colari and the most widespread and most prestigious, Lovari. The dialects can be traced back to former tribal and/or occupational units. (There are only minor linguistic differences among these subdialects). The rest of the Romăni-speaking population belongs to three unevenly represented dialects, Gurvari, Romungro and Sinto.

The essential grammatical features and a great part of the lexicon are common in each of the Romăni dialects spoken in Hungary. Dialectal differences are limited to certain phonemic-phonetic traits and especially to the stock of loanwords, the latter depending on the immigration history (that is to say, on its period and former contacts with other peoples).

As to their political status, Gypsies in Hungary until now were not considered to be a nationality, but as a separate ethnic group, having their own cultural values.

Characteristics of the type of bilingualism in Gypsy children.

Childhood bilingualism. The majority of children acquire L2 -- Hungarian -- in childhood (at the beginning of their school years). In the case of some of the children from the outskirts of the village the acquisition of L2 occurred in their infancy, parallel with the acquisition of L1, the Lovări dialect. A fundamental property of the development of childhood Gypsy bilingualism is the fact that, given a homogeneous L2 environment (e.g. in the school), the rate of acquisition of L2 is much faster than would be possible in adult age.

Therefore, in the favorable learning situation of Răckeve, (not far from Budapest), for Gypsy children exposed to Hungarian only at school, it takes about two years to approach the linguistic level of those disadvantaged children in their peer group whose mother tongue is Hungarian.

Natural bilingualism. Gypsy children acquire the L2 in a spontaneous, 'natural' way, under the pressure of the bilingual situation and needs of school communication, and not in the course of didactically planned formal instruction.

These circumstances resemble those of first language acquisition. As it is known, the infant, too, induced by the fundamental needs of communication acquires the grammar of his mother tongue by an instinctive analysis of the utterances heard from his environment.

Bilingualism of a diglossic type. From a sociolinguistic point of view the bilingualism of Gypsy children belongs in the category labeled 'diglossia' in modern

sociolinguistics. In this type of bilingualism the communicative role of the two languages is different; either of them can only be used in well-defined speech situations (with well-defined speech partners and in connection with certain topics); one language is generally used in the 'informal' 'intimate' type of communication, the other in communications of the formal, official type. This functional separation of the two languages accounts for the fact that a number of Gypsy children entering school hardly know any Hungarian, although their parents generally are fully bilingual. Loväri seems to be a totally adequate means of communication for bilingual Gypsies talking about everyday topics in the family circle or among themselves. Hungarian is for them the language related to 'high culture' and the means of interactions established with members of the other linguistic community. Gypsy children themselves consider the Loväri dialect to be the only language suitable for home communication; this is the natural language of all that belongs to their proper environment.

As to the development of the ability of Gypsy children to know when to use which language, that is, the acquisition of a rudimentary 'communicative competence', this is largely promoted by the fact that in a certain number of speech situations (first of all in inter-group communication) the differences in the possible use of the two languages are clear-cut and that, on the other hand, there is a continuous feedback correcting inappropriate language choice. It does not mean, of course, that the code-switching in intra-group communication would not be highly regulated by sociolinguistic rules, also to be acquired by Gypsy children. An example of this intragroup language shift recorded from the communication of Gypsy children was the following: the language they used in play situations was almost exclusively the Loväri dialect; e.g., when they left the classroom in order to go to play in the school yard, they suddenly switched languages, however well they spoke Hungarian. There was one exception: when the children were 'playing school' they switched over to Hungarian; this code-switching indisputably served to guarantee the authenticity of this particular game.

It is very characteristic that even those Gypsy children whose mother tongue is Hungarian acquire Loväri in the course of time; otherwise they would be unable to take part in 'informal' communication.

Mastering a flawless language shift, however, is very difficult for Gypsy children in the first and second grades, especially since for a certain period they cannot yet keep the two language systems apart properly. In speaking Hungarian, they often employ Loväri elements, above all, by substituting for Hungarian suffixes, conjunctions, pronouns and articles, that is, for grammatical elements in general, their Loväri equivalents.

Some characteristic features of the Hungarian of Gypsy children

Réger's investigations had several different purposes. First of all she tried to describe the levels of Hungarian language competence of Gypsy children entering school, as well as their special difficulties (originating from their Lovxxxri mother tongue) in the course of learning Hungarian. On the other hand the investigation focused on the process and phrases of this spontaneous second-language acquisition as well as the differences which distinguish it from the acquisition of Hungarian as a first language.

The morphological investigation (Réger, 1978). In this study Réger tested the use of the most frequent morphological markers was: the plural ending of nouns, some important case-suffixes (accusative, instrumental), the use of the past tense of verbs, and so on.

The elicitation technique was similar to that of Jean Berko. The subjects were 16 Gypsy children from the school of Ráckeve; the same test was administered to a control group from the same village, consisting of 16 disadvantaged children of Hungarian background. The Gypsy children were around 8 years of age, and those of the control group 7-8 year olds.

Gypsy children are often uncertain about the use of even the most important Hungarian suffixes. Thus, in the answers to that group of test items requiring the pluralization of nouns by the plural suffix *-k*, the substantives very often remained unmarked. The children's spontaneous speech equally reflected this grammatical uncertainty, as example (14) recorded during the period of testing shows.

(14) *Rá vannak virág.* Correct: *virágok.*
"Flower are on"

The plural ending was neglected to a higher degree when the noun-stem itself ended in *-k*. These higher percentages probably indicate that in certain cases the children identified the stem-final *-k* with the plural ending *-k*. For example in place of *ezek kerekék* "These (are) wheels" they said: *ezek kerek* "These (are) wheel".

As to the items testing the use of the most important case-suffixes indicating **location** and **direction**, totally unmarked forms occurred rather infrequently; more frequent were word-forms marked deviantly from a functional point of view, as in (15) and (16).

- (15) Test question: *Kihez megy oda a cica?*
 "Whom does the cat go to?"
A kutyánál. Correct: *kutyához.*
 "At the dog" "to the dog"

- (16) Test question: *Hol van a virág?*
 "Where is the flower?"
Az asztalra. Correct: *asztalon.*
 "Onto the table" "on the table".

The difficulties derive here from the differences between the systems of local relations in Hungarian and Loväri. The Hungarian language distinguishes the elements which express stative local relations (Where), and two types of dynamic local expressions directional (Where to) and separating (Whence), whilst in the Loväri system the elements corresponding to the first two types coincide, as in English and many Indo-European languages, for example, as well. Thus the systematically deviant use of the respective Hungarian case endings may be explained by the transfer of function of Loväri prepositions.

Some results of Réger's (1978) syntactic investigation. Data obtained from elicited sentence completions and descriptions indicate that older Gypsy children show mistakes characteristic to the early phases of L1 acquisition. Two structure types are very telling in this respect. As (17) and (18) show, sentence structures simultaneously containing the personal pronoun and the referentially identical substantive appear. These structures are typical in L1 at the first appearance of anaphoric pronouns.

- (17) *(a róka) megfogta a nyakát a kakasnak és a házba szaladt vele a kakasval*
 "(the fox) took the cock by the neck and ran into the house with it the cock"
 (18) *A képen rajta látok (utat).*
 "On the picture on it I see (road)"

Coordinate or subordinate clauses also appear without relational elements (conjunctions) as independent units of communication. This phenomenon is a very regular one in the first-language acquisition process. The fact that it occurs so frequently in the sentence-construction of Gypsy children also is startling because in their mother tongue, the Loväri dialect, several of the most frequent conjunctions are borrowed from Hungarian (e.g. *de* "but"; *vagy* "or"; *hogy* "that") which from the formal and functional points of view totally overlap with the corresponding Hungarian conjunctions. Nevertheless, in the early period of the Hungarian-language acquisition

Gypsy children frequently do not use these conjunctions. This is again the reappearance of an early L1 feature in L2 acquisition as (19) and (20) show. In (19) a *that* complementizer is missing, while in (20) a *because* conjunction.

(19) *Tudta a róka [] nem / nem van senki
otthon.*

"The fox knew [] no / nobody was at home"

(20) *A nyuszi azért nem tud bemenni/ [] kicsi
az ajtó.*

"The rabbit cannot go in/ [] the door is small"

Linguistic socialization in traditional Gypsy communities (Réger, 1988, 1990b,c).

In coping with the educational problems of Gypsies, one of the greatest sources of difficulties is that we hardly know anything about what happens to Gypsy children until they get to institutions -- kindergartens and schools: with regard to every aspect of family socialization there is a lack of reliable information and specialized knowledge. Earlier educational research, relying mostly on guesswork and partly on casual observations, characterized the education and family socialization of children in traditional Gypsy communities as a negative process from all possible points of view: all the children's failures at school were attributed to their supposed severe educational and linguistic deprivation, to their underspecialisation.

Réger's study was primarily concerned with this latter, controversial aspect of Gypsy children's family education: the functions, features, and peculiarities of adult-child linguistic interaction, and children's linguistic socialization in traditional Gypsy communities. Part of the motivation for this study came from a visit of Jean Berko to Hungary in 1981 and her involvement in pilot field work. A further part of this investigation was concerned with certain aspects of the communication within Gypsy children's communities. The research tried to explore what Gypsy children use their native language for (beyond the trivial communicational purposes of their everyday life).

Data were collected from 13 settlements of the country. Only such bilingual Gypsy communities as had previously been proved to preserve some kind of ethnographic traditions were selected for research. The data of her investigation shed light on a situation radically contradicting the assumptions about the serious linguistic deprivation mentioned above: they have detected a very rich, oral Gypsy culture, which, from the moment of birth, surrounds the Gypsy child, and of which the child is a participant from the first moments of consciousness.

Salient peculiarities of child-directed speech could be classed into two groups. Some of these peculiarities are to be found in other cultures as well. The presence of these phenomena, e.g. the simplification of the phonological form of words -- following universal rules --, the use of baby-talk lexicon, the great redundancy induced by the frequent repetition, the chanting, the expressive prosody of the speech directed to the child, all these clearly show, that, similarly to members of other language communities, **Gypsy speakers involuntarily modify their language use when talking to a child.**

The other group of phenomena explored in Gypsy child-directed speech is closely related to the peculiarities of Gypsy folk culture, just as the characteristics of children's plays and narratives are. Dialogue-improvisation in the language spoken to the child. A further important feature of the pieces of Gypsy folklore is their strongly dialogical character, which is characteristic not only of the epic genres (folk-tale, ballad) but, unusually enough, of lyrical songs, of the genre of the so-called "slow song" as well..

A well-known phenomenon for the researchers of child-directed speech, of the "input language", is dialogue-modelling. In Réger's investigation an unusual, unique alternative to dialogue-modelling was found: long, colorful dialogues built up of numerous turns, improvised by the mother, whose topic is not a directly experienced event, but the future life of the child, the tasks of the future, activities, possible conflicts in adult life, and all of this very often in a very minute, tale-like or dramatic presentation.

The texts collected among Gypsy children indicate that children living in a traditional Gypsy community, acquire by school age the characteristic features of oral Gypsy culture: the improvisational presentation and even the use of formal style.

Why do children coming from a traditional Gypsy environment encounter serious difficulties, first of all linguistic ones, at school? As to the characteristics of natural L2 learning process, it was found that the greatest part of the systematical deviations from standard Hungarian were almost completely identical with the deviant structures produced by monolingual Hungarian children in a definite phase of their language development. The reasons should be looked for elsewhere, not in the development of grammar. We have a case here of a real clash between two systems of language use. The literate society, and its agent, the schools does not appreciate the oral skills of improvisation, spontaneity and the like. It requires standardized, matter of factly, rational discourse. Language certainly plays a great role in the alienation from schools; but it does so mainly not in connection with grammar or the lexicon, but in connection with divergent systems of communicative competence.

LANGUAGE PATHOLOGY IN CHILDREN

(Mária Gósy)

As everywhere, there are various trends in language pathology research and practice in Hungary. these works are performed by people working in research and teaching centers, in hospitals, and in the field of speech therapy.

This overview makes an attempt to summarize facts and results concerning the main aspects of language pathology research which are in progress in Hungary. Mainly those aspects will be highlighted that are related to normal language acquisition processes. Some fields like language pathology related to peripheral conditions like cleft palate and the or special language development and treatment of multiply disordered and mentally retarded children will only be mentioned.

Hearing impairment, deafness

Hearing is one of the basic necessary abilities children should have in order to acquire the mother tongue normally. Beside the traditional (and not always reliable) methods, a new method and device (G-O-H) has been developed for screening young children. This method is based on using specially synthesized, artificial monosyllables which operate halfway between pure-tone audiometry and speech audiometry. The examination is reliable, quick, and there is no need for any expert, audiologist or specially trained assistants. After having read the brief description of the manual, (kindergarten) teachers, speech therapists, nurses or even parents can perform the procedure. The method is language dependent but it can be applied to any language. Since 1985 numerous children have been identified with different types and extents of hearing losses due to the G-O-H hearing screening method. (Cf. Gósy, Olaszi, Hirschberg, and Farkas, 1987; Gósy, 1988a; Farkas et al. 1989.)

There are many results concerning the articulatory ability, language organization or speech intelligibility of hearing-impaired and deaf children. On the basis of such research and experience, the developmental formation and correction of verbal language, particularly the pronunciation of deaf children have been defined. Various experimental results have led to establishing new methods for their education (Csányi 1975; 1982; 1987).

There is no official method in Hungary for using sign language; severely hearing-impaired and deaf children are taught only oral language in special schools. There is an effort for the integration of aided hearing-impaired children to normal schools. A new test is under development to asses the social speech intelligibility of hearing-impaired and deaf children. The test is the "opposite" of speech audiometry: the

intelligibility of nonsense syllables uttered by hearing impaired children is evaluated by normal-hearing persons. On the basis of the scores, the everyday intelligibility of hearing-impaired and deaf children can be predicted using a mathematical formula. This is a very simple way for teachers and speech therapists to get information on the intelligibility of children's speech out of the speech therapy network (Gósy, 1988b).

A new opportunity for deaf children to hear human speech has also emerged in Hungary. This spring two children received a minor synthesizer implanted in their cochlea in an operation which was performed in the Heim Pál Children's Hospital.

A recent investigation has been carried out to detect some sources of possible future hearing loss in the everyday life of adolescents. Results summarized and labelled as walkman syndrome point out several consequences of using a walkman at a relatively high intensity level by the teenagers. 13- and 14-year-old children - mainly boys - were checked, ones habitually listening to music through the headphones of walkmans at an intensity of 90-95 dB. Beside the possible hearing loss later, other real problems have been found like articulation difficulties, speech behavior problems, and neurological consequences (Gósy, 1988c).

Perceptual problems

Perceptual and comprehension problems should be considered when (i) controlling hearing-impaired or normal-hearing children complaining of not understanding speech, (ii) deciding on ordering a hearing aid, particularly in questionable cases, (iii) detecting dyslexic and possible dyslexic children, (iv) checking children's acoustic feedback in the case of articulation disturbances, (v) in the case of brain dysfunction and (vi) examining children with delayed speech development.

In 1983 an age-specific, phonetically balanced **speech audiometry** test was set up for clinical use. This test material consists of monosyllables which are familiar to children and are announced by a trained female speaker, a type of voice that is supposed to be familiar for young children (Farkas, Gósy, Hirschberg, 1983).

More and more schoolchildren tend to have difficulties in reading acquisition and in understanding what they read. The proportion of such children is rather high in all Hungarian primary schools and many of these children are considered to be **dyslexics**. Researchers have proposed several explanations for the "syndrome" of dyslexia. Examining the supposed causes of dyslexia, low language inability has been found as the most important one. The French Inisan Test has been adopted for detecting possible dyslexic children in kindergartens. (Cf. Kovács 1970; 1980; 1990; Kovács, Ligeti, Palotás, 1979; Meixner 1986; Laczkó 1988.)

In 1989 the standardization of the GMP test-package for measuring the speech perception and speech comprehension performance of children was finished and since 1990 the test-package has been widely used by kindergarten teachers, speech therapists etc. The test-package is age-specific and provides an opportunity for obtaining information on the operations of each hypothetical level of speech understanding mechanism quasi-separately, ie. to detect which (if any) of the decisions the understanding mechanism has to perform are mistaken or incorrect. By means of the test-package, the following levels can be examined: hearing; acoustic, phonetic and phonological perception; working of activated vocabulary; lip-reading ability; working of verbal and visual memory; laterality; handedness; text-comprehension (Gósy 1989; 1990).

Speech production failures: Articulation errors and overall speech coding problems

There are many investigations concerning the nature of the most frequent **speech errors** of children and also their therapy. Investigations focus on (i) the articulation difficulty of some speech sounds, mainly of sibilant consonants, (ii) the acoustic characteristics of normally and abnormally pronounced consonants, and (iii) the special treatment of correcting these speech errors.

The most frequent problems in relation to the Hungarian sound system are the mispronunciation (or lack) of the rolled *r* sound and the voiced and unvoiced fricatives and affricates such as *s*, *z*, *ts*, *dz*, *sh*, *zh*, *tsh*, *dsh*. The first four consonants are normally dental while the other four ones alveolar. So, the pronunciation of the dentals similarly to the English *th*, or that of the alveolars as palatals or laterals, or pronunciation with a faulty tongue movement, are classified as errors. There is an important research concerning the interrelation of tooth-disorders and certain speech errors. (Cf. Gereben 1978; Montágh et al. 1978; Kovács 1970; Kovács and Rehák 1974; Rehák and Kovács 1978; Lőrík 1982.)

Also worthy of note is a special kindergarten-like institution for children (ages between 3 and 7) who suffer from articulatory and/or speaking deficiencies. However, this [kindergarten] has a special project to improve the children[s] speaking ability performed by trained speech therapists all over the day (Huszár 1988).

There are also a fair number of studies about stuttering: its background, facts and treatment possibilities. There are successful improvements in stuttering children achieved in Kőszeg (West-Hungary) where a unique special school offers a very intensive improvement procedure for such "difficult cases" (including also psychotherapy, personal interactions, every-day courses, etc.). (Cf. Babai 1978; Mohr 1978.)

Complex disturbance of language and speech

There is an increasing number of children with **delayed mother tongue acquisition** of various extents and types. The general conclusion about the phenomenon of delayed speech is that the expression [delayed] is misleading since there is not an actual "delay" in the acquisition process, i.e. these children[s language level does not clearly show an earlier stage of acquisition. [Delayed speech] is a more complex disturbance that may concern a few, many or all aspects of language and speech. There are various interactions of the fields of speech: acceptable articulation ability with disturbed grammar or, an early-stage grammatical structure of Hungarian with speech errors concerning several speech sounds or disturbed pronunciation, grammar and speech perception and/or comprehension deficits or various problems in naming objects, in the working of the verbal and visual memory or overall problems in the manifestation of cognitive functions etc. Various methods have been offered for detecting children with delayed speech as soon as possible (at least around 3 years of age). (Cf. Juhász 1986; Gereben 1979; 1986.)

Recently, there are three active attempts to develop reliable testing methods. Ágnes Juhász made an adaptation if the Children's Token Test, Emőke Kovács directs the work of several students on the Hungarian adaptation of the Illinois Test of Psycholinguistic Abilities. Finally, Pléh, Palotás, and Lőrík try to develop a screening method relying on specific features of Hungarian. They find that morphonological maturity, and the use of the language of space might provide good differential diagnostic tools.

The status of children who do not use language and speech seems to be questionable (concerning also their mental "development"). For the communication of these [autistic] and [elective mute] children, the Bliss-system has been adopted for Hungarian and applied for teaching and everyday communication (Kálmán and Kassai 1987).

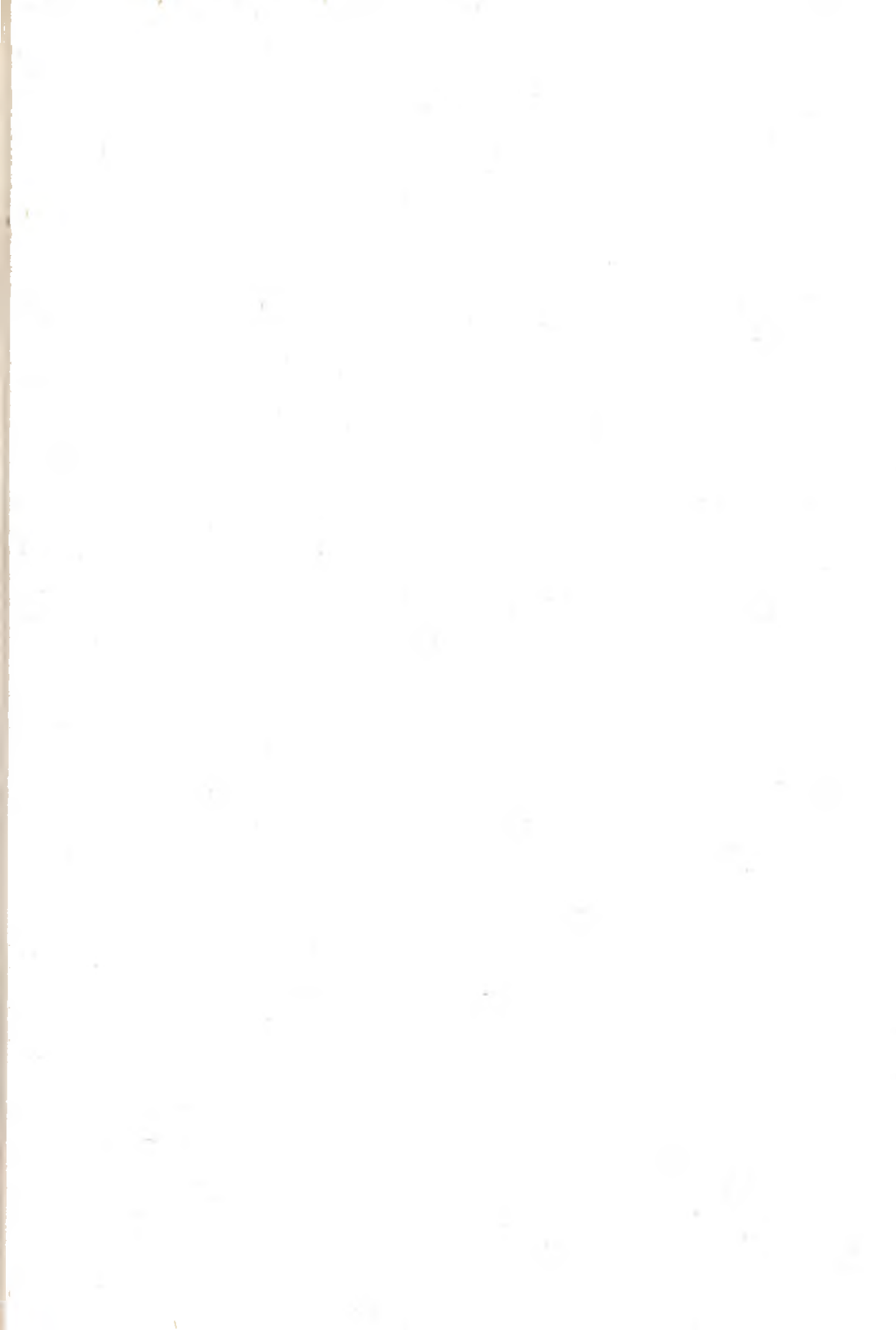
Aphasia, dysphasia, agnosia and apraxia are complex disorders of language and speech related to brain dysfunction. Detection, differentiation, determination, therapy and rehabilitation - every approach seems to be very difficult particularly in children. The goal in the therapeutic process could be to enable the patients to differentiate the simplest conventional signs, to construct their most suitable sequences so as to use this more and more complex arrangement with success as means of linguistic communication at the various levels of the language system (Gereben 1972; Hegyi and Janka 1989).

Voice impairment (dysphonia, rhinophonia)

Dysphonia as a voice disorder is, unfortunately, very frequent among young children. According to recent data, 3% of children between 2 and 4 years of age, while 20% of kindergarten and 37% of schoolchildren (ages between 6 and 8) are labelled [dysphonic] as to their voice production. The majority of them are boys. There are interesting investigations concerning the articulatory and acoustic peculiarities of this type of voice, and also the therapeutic possibilities. Recently, an excellent guide (both for speech therapists and parents) has appeared together with a cassette (containing tape recorded material) as a corrective "course" for improving the hoarse voice of the child (Pataki 1985; Balázs 1990).

From various sound phenomena of infants - like cry, breathing, cough - important conclusions may be drawn concerning the well-being and general condition of infants. In disease, on the other hand, they may furnish important information on the site and origin of the underlying pathological changes. As a result of this research, a novel objective approach has been found to auditory signs offering a framework for a consistent typology of the sounds investigated. The data obtained are critically appraised from the point of view of diagnosis, therapy, prognosis and documentation (Hirschberg and Szende, 1982).

Research and experiments focus on both types of disordered speech which cause **rhinophonic voice** (ie. rhinophonia aperta and rhinophonia clausa). Several case studies give descriptions on the phenomenon of **hypernasality**, its treatment from the point of view of physicians and speech therapists. Cleft-palate children frequently have problems not only in articulation but also in hearing. These children's treatment requires the team-work of an ENT-specialist, an audiologist, a speech therapist, and sometimes also a phonetician. One of their first results is a test by which the speech intelligibility of cleft-palate children can be judged. (Cf. Hirschberg 1986; Hirschberg et al. 1986; Gereben 1988.)



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